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sooner did modern scientific inquiry experiment upon the atmosphere than it became so plain and easy of apprehension, that the most unlettered of the present day may understand more of its properties than many of the wisest of the ancients. The air we breathe is composed of oxygen, nitrogen, aqueous vapor, carbonic acid and ammonia, in large quantities, besides other gases in smaller proportions and under varying circumstances, such as stricte of ammonia, a gas lately discovered, carbonic hydrogen, sulphurous acid, gas, etc. The ancients recognized four elements—Earth, Air, Fire and Water—which are really only two elements. The earth contains all of them, and air and water are composed of the same substance in different quantities; while fire is the flame produced by a union of two or more gases in a state of combustion. Until 1774, when Dr. Priestley analyzed the atmosphere, and ascertained its composition by practical experiments, the world was in comparative ignorance of the subject. At the same time a French chemist was also experimenting, and thus added to the world's store of scientific knowledge. Although oxygen is not the predominating gaseous element of the atmosphere being only one-fifth to four-fifths nitrogen, etc.—yet it is the most important. It sustains all animal life, and supports combustion. It is found everywhere—in animals, plants, water; even the solid rocks contain it; marble being 60 percent oxygen. It is odorless and colorless, and therefore invisible, but its presence may be easily ascertained by a simple experiment, which was shown by experiment. The difference in properties between oxygen and the other gases named was shown by experiment. Pure oxygen was not fitted to sustain life. It must be diluted, and the best substance yet found to unite with it is nitrogen; which neither supports life nor light or combustion. Carbonic acid is the result of combustion, and the more exercise people take the more oxygen they absorb; combustion is thus increased, the system is purified and kept healthy. The carbonic acid would be taken up by animal life, and which, if retained, would be an instant death, in the case of man. The action of the sun then upon plants and vegetables enables them to decompose the carbon, thus freeing the oxygen, which in turn goes to the support of animal life. Thus all life—animal or vegetable—depends on each other for support and existence. Carbonic acid in the animal system produces decay which is simply slow combustion. It follows therefore (other things being equal) that whatever increases the combustion in the system vitalizes it and restores health and vigor. Consumptive should note this fact. Carbonic acid because of its weight falls to the bottom, and is low places, such as walls, corridors, etc. It never invades however in the open air because of the neutralizing effects of other gases, but in narrow ill-ventilated rooms or places it is certain death. The lecturer then pointed out the great necessity for pure and good ventilation in dwellings, tenement houses, rooms, etc., and impressed upon the audience the danger resulting from carelessness in this matter. If landlords or agents will insist on ignoring the value of health and long life to their tenants, then workmen should take the matter in their own hands and by clean, good ventilation and healthy food at home, and abundant exercise abroad, they may successfully defy the avic that induces landlords to refuse to expend money on improvements in ventilation.

The lecture was admirably illustrated with experiments designed to show the intimate relation of pure air to all the life giving powers of body and mind. These lectures are promoted by a committee of gentlemen, who have taken this method of placing before the people information on subjects of vital importance to every individual citizen, who does not usually pay attention to the commonest laws of hygiene and health. The lectures are to be continued during the winter, and being free to all who choose to attend, are well calculated to benefit the community. A free Reading Room is also open every day and evening except Sunday, at No. 282 West 13th street.

**IMMIGRATION.**—From the 1st to the 11th of the present month three thousand eight hundred and eighty-six immigrants at this port arrived from Bremen, Rotterdam, Hamburg, London, Liverpool and Glasgow.

**LIGHT WANTED.**—Thirteen lamps were reported by the Police of the Sixth Precinct, as not having been lighted during Saturday night, and these in the worst portions of Baxter street, Courtlandt Alley and such localities.

**THE NAVAL CONTEST.**—The Winoski is still lying at the dock, foot of Delancey street, waiting for her opponent, the Algonquin, to get ready for the sea race. She will commence to day another 96 hour trial, which, when terminated, will be followed by another trial of the same duration. These trials are expected to determine some very interesting and important points in Naval engineering. By the time the Winoski has finished her second trial, it is expected that the Algonquin will be ready for action.

**WEEK OF PRAYER.**—The closing exercises of this memorable week for the Christian Church took place yesterday. All the services during the week were well attended, and were marked with great religious success. Revival meetings are being held in progress in many churches, and others are now opening them. Sermons on the different subjects suggested by the Christian Alliance were preached yesterday in the several churches throughout the city. In Trinity M. E. Church, Rev. T. F. Hildreth, the pastor, preached an eloquent and powerful sermon on Missions, urging his congregation to show the intensity of their desire for the world's conversion by liberal offerings to the cause during the jubilee year of their church. Bishop Simpson will deliver a lecture to St. Paul's M. E. Church, corner 23d street and 4th avenue, on Thursday evening next. Subject—'New York as a Mission Field.'

**THE EXPLOSION OF THE TWO NEPTUNE.**—Coroner Gover held an inquest on Saturday at the New York Hospital, on the body of John Walker, late third engineer of the steamer Neptune, whose death was caused by acids received on the 3d inst. by the explosion of the boiler of the Neptune. The jury rendered a verdict of accidental death. Deceased was 28 years of age, and a native of New York. The son of Captain Williams of the Neptune, now lies at the Hospital, in a critical condition.

**FUNERALS.**—On Saturday the funeral obsequies of the late Robert B. McInture were held at the Church of the Holy Communion, corner 20th street and 6th avenue. Long before the opening of the door was crowded by the friends and admirers of the deceased. Among those present were the members of the Chamber of Commerce, the Commissioners of Emigration, officers of the Bank of Commerce, and the leading business firms. At 2 p. m. the body arrived at the church and was received at the porch by Bishop P. Pier, and Dr. W. A. Muhlenberg, who preceded it down the aisle reciting the solemn burial service. The coffin was a plain mahogany one with silver nails and a plate recording simply the name and age of deceased. On the head of the coffin was a floral crown composed of carnations, on the center a floral cross, and at the foot a wreath. After the funeral the body was interred in Trinity Cemetery. A funeral sermon was preached yesterday by Dr. Muhlenberg.

The following gentlemen acted as pall-bearers: Wm. H. Aspinwall, George C. Ward, Alfred Bell, J. A. Green, Samuel Brown, Horatio Allen, James Lenox, Daniel Lord, Richard Irving, J. D. Wolf, H. R. Harris, Geo. Higginson, Cyrus Curtis and Adam Norris.

**THE LATE ELIJAH F. PURDY.**—Mr. R. A. Lewis, photographer, of No. 160 Chatham street, has succeeded in producing an excellent likeness of this lamented gentleman. The personal friends of Mr. Purdy, and members of his family, pronounce the picture a most faithful portrait. Copies are for sale.

**STABBED TO DEATH.**—Patrick Dunlap, the laborer, who was stabbed in the breast by Edward Johnson, during a quarrel between the two, which occurred on Tuesday afternoon, died at the New York Hospital on Saturday night. Coroner Collins will hold an inquest on the remains. Johnson, the alleged murderer, is still at large.

**POLICE.—A NEW SUB-PRECINCT.**—The inhabitants of the town of West Farms having applied to the Police Commissioners for six officers of Police, and offering to pay them, that number was sent to Fort Washington on Saturday and will be attached to the 32d Precinct until further notice. They will be stationed at the village of Tremont, and it is expected to do duty there this morning. This will be a regular sub-precinct, and will be visited daily by a sergeant from the 32nd. As the Department will not at present put up a new line of telegraph, the communications will be through Fort Washington, and from thence on horseback to Tremont.

**ACCIDENTS, SUICIDES, EXPLOSIONS, &c.**—John H. Kratz, a German, living at 208 East Houston street, committed suicide by poisoning on Saturday. Verdict accordingly. John Foley fell from the pier, foot of Leroy street, N. R., to the deck of a canal boat, and was instantly killed. Coroner notified. Andrew Gleaser, aged 35, a native of Albany, residing at 96 Greene street, was severely injured by falling over a banister during a bar-room fight on the 4th inst., corner of Spring and Greene streets, from which he died at the New York Hospital on Saturday night. Coroner notified. Joseph Derric, aged 19 years, residing at 14 Franklin street, was run over by a truck in Mulien lane on Saturday, and instantly killed. The Coroner's jury gave a verdict of accidental death. An unknown man, about 30 years of age, on Friday night walked or fell from the Houston street ferry boat and was drowned. A skiff was lowered and efforts were made to rescue the man, but without success. The body was not recovered. Bernard McNamany, Wm. Darling and John McGinniss were badly injured by a gas explosion whilst repairing the service pipe at 144 Prince street on Friday night. Mrs. Annie G. Suple and three of her children, residing on the southwest corner of 11th avenue and 40th street, were badly burned by the accidental explosion of a kerosene oil lamp on Saturday night. The sufferers were taken to Bellevue Hospital for treatment.

**FIRE.**—About midnight on Saturday a fire broke out on the fourth floor of building, No. 17 Day street, in consequence, as is supposed, of the stove being overheated. The third and fourth floors are occupied by H. Plegel, importer and manufacturer of ladies and children's hats, cap and bonnet frames; the second floor front by Cornwell, Murphy & Bennett, manufacturers of India rubber goods, and the first floor and basement by E. Simpson & Co., wholesale liquor dealers. Damage collectively by fire \$400; by water \$500; insured.

**THE PIANO MAKERS** of this city numbering some sixteen hundred are represented by an Association numbering about 500 members have lately held meetings in relation to the 'bright hour question,' and decided to send delegations to a convention of German Trade Associations to be held for the purpose of considering the question on the first Thursday in February. The piano makers have also organized a Fire Insurance Company among themselves, which is temporarily officered by the officers of the Piano Makers' Association. The great majority of the piano makers are Germans.

**ROMAN CATHOLIC ORPHAN ASYLUM.**—The annual ball of the Young Men's Catholic Association for the benefit of the above institution, will come off this evening at the Academy of Music. Two bands of music are engaged, and nearly all the tickets have been sold.

**COURT CALENDAR THIS DAY.**—Supreme Court, General Term. No enumerated motions. Nos. 32 to 44 and Nos. 46 to 58. Preferred cases begin at 10. Civil—Part I.—Nos. 511, 517, 545, 515, 529, 524, 441, 442, 515, 517, 519, 521, 523, 525, 527, 529, 531, 533, 535, 537, 539, 541, 543, 545, 547, 549, 551, 553, 555, 557, 559, 561, 563, 565, 567, 569, 571, 573, 575, 577, 579, 581, 583, 585, 587, 589, 591, 593, 595, 597, 599, 601, 603, 605, 607, 609, 611, 613, 615, 617, 619, 621, 623, 625, 627, 629, 631, 633, 635, 637, 639, 641, 643, 645, 647, 649, 651, 653, 655, 657, 659, 661, 663, 665, 667, 669, 671, 673, 675, 677, 679, 681, 683, 685, 687, 689, 691, 693, 695, 697, 699, 701, 703, 705, 707, 709, 711, 713, 715, 717, 719, 721, 723, 725, 727, 729, 731, 733, 735, 737, 739, 741, 743, 745, 747, 749, 751, 753, 755, 757, 759, 761, 763, 765, 767, 769, 771, 773, 775, 777, 779, 781, 783, 785, 787, 789, 791, 793, 795, 797, 799, 801, 803, 805, 807, 809, 811, 813, 815, 817, 819, 821, 823, 825, 827, 829, 831, 833, 835, 837, 839, 841, 843, 845, 847, 849, 851, 853, 855, 857, 859, 861, 863, 865, 867, 869, 871, 873, 875, 877, 879, 881, 883, 885, 887, 889, 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